“Supporting effective biology learning environments through research in education, communication, and engagement.”

Summary:
My research focuses on methods of building interest in STEM and how science learners understand and communicate biology, particularly with the use of visual representations. To pursue my research program I developed a multi-pronged approach. First, I have conducted a series of investigations on how individuals make sense of post-secondary biology content being communicated through visual diagrams and web-based resources. Second, I have used systematic approaches to develop quasi-experiments to test interpretations using biometric data and test learning framework models across disciplines. Third, I have studied methods for how people share understandings of science with others and engaging learners in practicing and communicating science in and outside of classrooms. My research has provided implications for successfully integrating collaborative and active learning in and out of classrooms, classroom design, and professional development for scientists, teachers, and docents. During my presentation, I will be sharing findings from my research program and future directions for further studies.